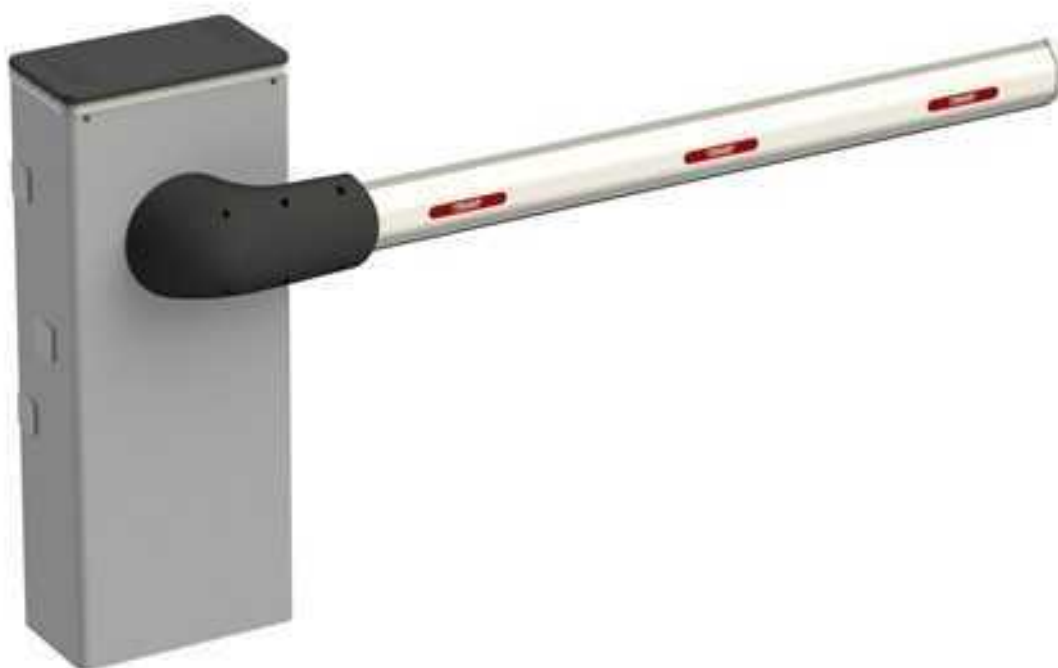




IS194 Rev.08 17/04/2024

BIONIK8

Automatic barrier Brushless



INSTRUCTIONS AND RECOMMENDATIONS FOR THE INSTALLER

1 Symbols

	Generic danger
	Dangerous voltage risk
	Useful information
	Refer to the Installation and use instructions
	Earth connection
	Temperature range
	Alternating current!
	Direct current !

2 Intended use

The BIONIK automated barrier is specifically conceived for installations in private or public car parks, in residential, commercial or industrial areas.
This product may only be used for its expressly intended purpose. Any other usage is prohibited.
ROGER TECHNOLOGY cannot be held directly or indirectly responsible for any damage resulting from incorrect, inappropriate or unreasonable usage of this product.

3 Limits of use

BIONIK8 barriers are suitable for VERY HEAVY DUTY operation and may be used with booms up to 8 metres in length.

4 Product description

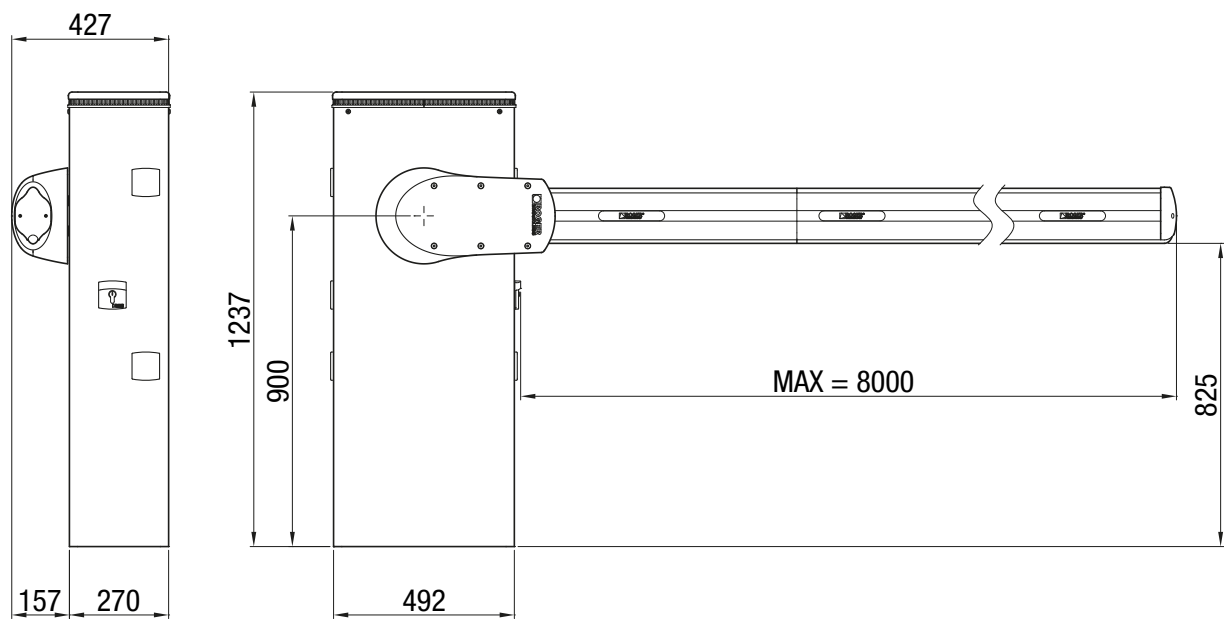
BI/008

BIONIK BRUSHLESS 36V barrier for bars up to 4 metres, with on-board control unit, absolute encoder, complete with fixing base with tie rods and screws, and boom fixing flange !

BI/008/115

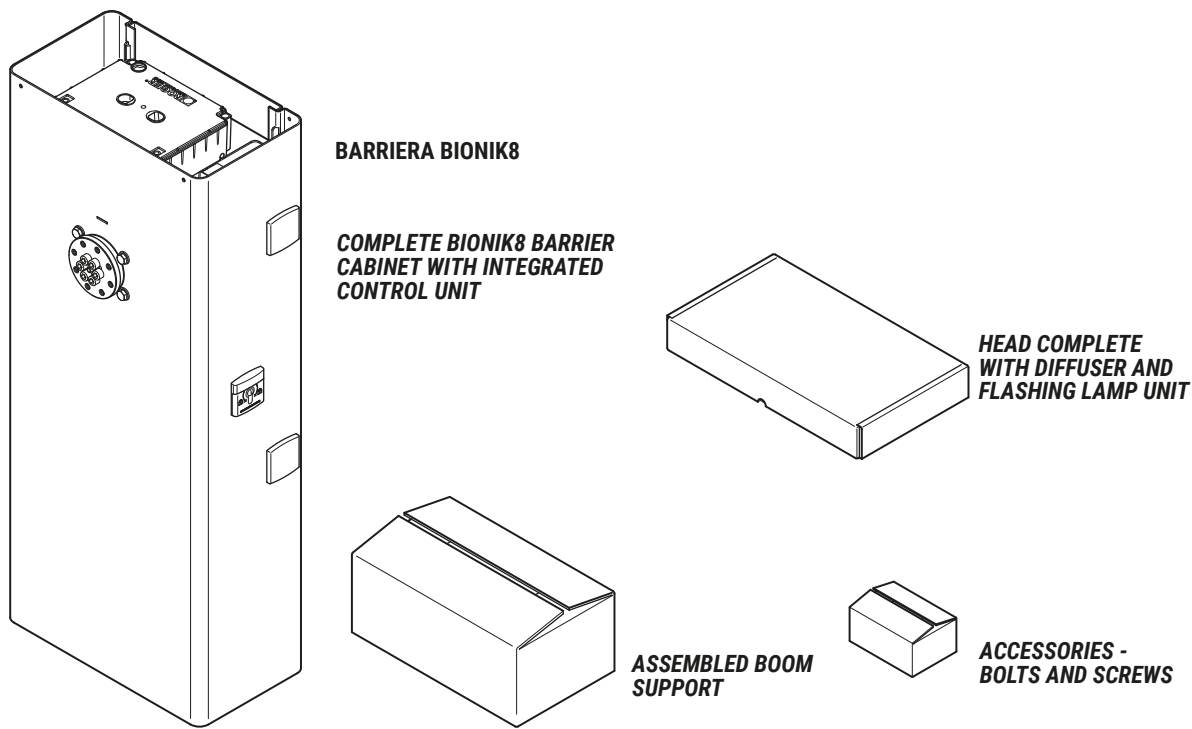
BIONIK brushless 36V barrier for bars up to 4 metres, with on-board control unit, absolute encoder, complete with fixing base with tie rods and screws, and boom fixing flange. For line voltages of 115V !

5 Dimensions



Note: all measurements are expressed in mm unless otherwise indicated.

6 Package content

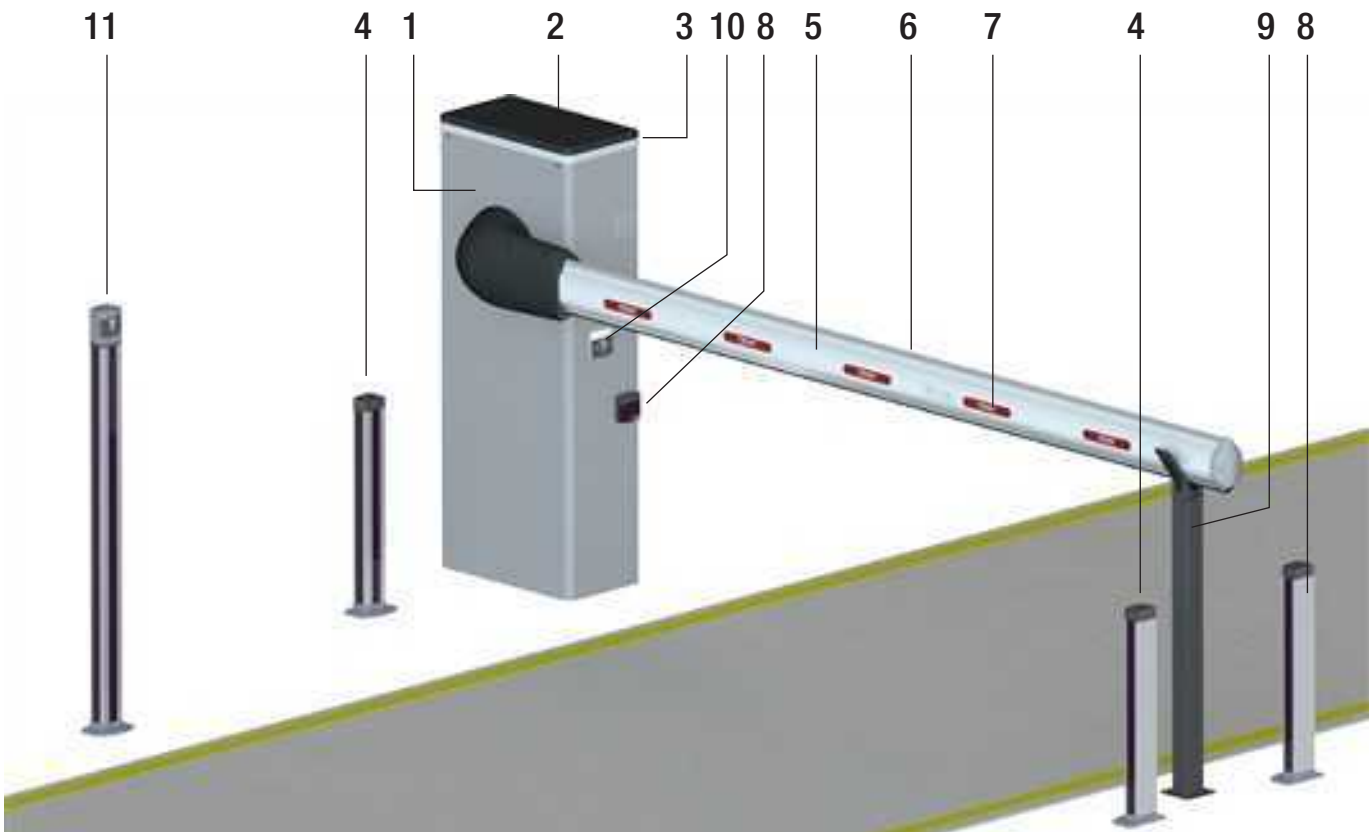


7 Technical characteristics

	BI/008	BI/008/115
Power Supply	230 V~ - 50 Hz ±10%	115 V~ - 60 Hz ±10%
Motor power supply	36V $\overline{=}$	36V $\overline{=}$
Starting power	300 W	300 W
Power consumption	0 ÷ 18 A	0 ÷ 18 A
Torque	10 ÷ 400 Nm	10 ÷ 400 Nm
Open / close time	9 ÷ 29 sec	9 ÷ 29 sec
Control system	ENCODER ASSOLUTO DIGITALE ABSOLUTE ENCODER DIGITAL	ENCODER ASSOLUTO DIGITALE ABSOLUTE ENCODER DIGITAL
Operating cycles per day (opening / closing - 24 hours no stop)	2500	2500
Use frequency	SUPER INTENSIVO SUPER INTENSIVE	SUPER INTENSIVO SUPER INTENSIVE
Grade of protection	IP54	IP54
Operating temperature	 -20°C  +55°C	 -20°C  +55°C
Accessories power supply	24V $\overline{=}$	24V $\overline{=}$
Boom	fino a 8 metri up to 8 metres	fino a 8 metri up to 8 metres
Emergency battery	OPZIONALE OPTIONAL	OPZIONALE OPTIONAL
Release system	A CHIAVE CON CILINDRO DIN KEY WITH DIN CYLINDER	A CHIAVE CON CILINDRO DIN KEY WITH DIN CYLINDER
Sound pressure during use	<70 dB(A)	<70 dB(A)
Control unit (integrated) 36 Vdc !	CTRL	CTRL
Force to be applied on the mechanical	<1,6Nm	<1,6Nm

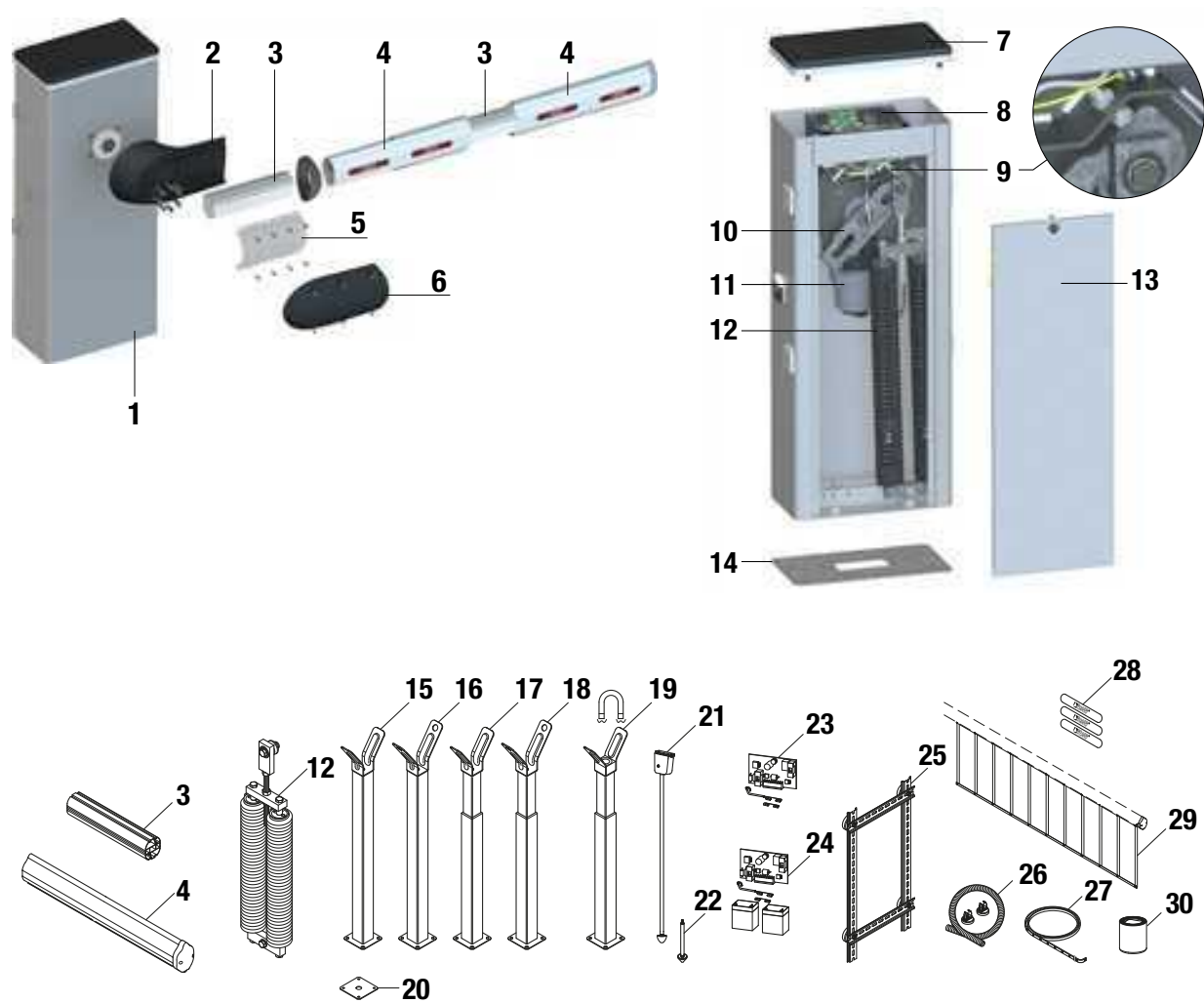
(**) Internal test verified at nominal values with maximum boom size at an ambient temperature of +25°C. The value shown is NOT the maximum value

8 Typical installation



1	Automatic Barrier BIONIK serie
2	Integrated control unit
3	Flashing light
4	External Photocell
5	Boom with shockproof rubber
6	Strip led
7	Reflective sticker
8	Internal Photocell
9	Fixed end rest for boom complete with a shock-resistant rubber mechanical stop
10	Release system
11	Key or keypad release switch

9 References and accessories



Codice / Code	Descrizione / Description
1	Barrier unit cabinet, in carbon steel with anti-corrosion treatment and painted
2	Aluminium boom support base, die-cast, with anti-corrosion treatment, painted
3 JNT/BA/128	BIONIK 8. Internal connection joint made of anodized aluminium.
4 BA/128/4	Boom L 4,1 m made of aluminium, with slot cover profiles and shockproof rubber
5	Zinc coated steel boom fastening bracket !
6	Aluminium boom fixing cover, die-cast, with anti-corrosion treatment, painted
7	Head in die-cast aluminium with anti-corrosion treatment and painted, complete with diffuser in transparent polycarbonate and BI/BLED/8 led lights
8 CTRL	Digital control unit for BI/008
9	Gate open/close mechanical stop
10	Steel springs fastening linkage lever

	Codice / Code	Descrizione / Description
11		Brushless ed encoder assoluto / Gear motor complete with Brushless motor and absolute encoder
12	SP/85/AS/02	2 Ø85 springs for booms up to 8 m
13		Corrosion-proof, painted steel inspection hatch
14	KT244	Galvanised base plate for barrier fastening
15	BAFS/01	Fixed end rest, non-adjustable, with rubber buffer
16	BAFS/03	Fixed end rest with rubber, non-adjustable, with holes for a latch chain and rubber buffer
17	BAFS/02	Fixed end rest with rubber, adjustable, telescopic with rubber buffer
18	BAFS/04	Fixed end rest with rubber, adjustable, telescopic with holes for a latch chain and rubber buffer
19	BAFS/05	Fixed end rest with rubber, adjustable, telescopic with rubber buffer and integrated magnet
20	KT231	Fixed end rest fastening plate
21	BAMS/01	Hinged end rest for booms
22	BAMS/01/EXT	Extension for hinged end rest
23	BI/BAT/KIT	Emergency battery kit complete with battery charger and wiring (optional)
24	BI/BCHP	Battery charge board complete with wiring (optional)
25	KT239	DIN bar
26	KT242	Magnetic cable passage kit
27	ALED/8C	8 m LED strip
28	R99/BASB20	Package of 20 refractive adhesive strips for the boom
29	BARK/02	Drop skirt in painted aluminium. L = 2 m
30	RS/GR2/100	Lithium grease (EP LITIO)

ATTENTION! For the correct installation and use of the accessories refer to the respective instruction manuals /

10 Installation

10.1 Preliminary checks

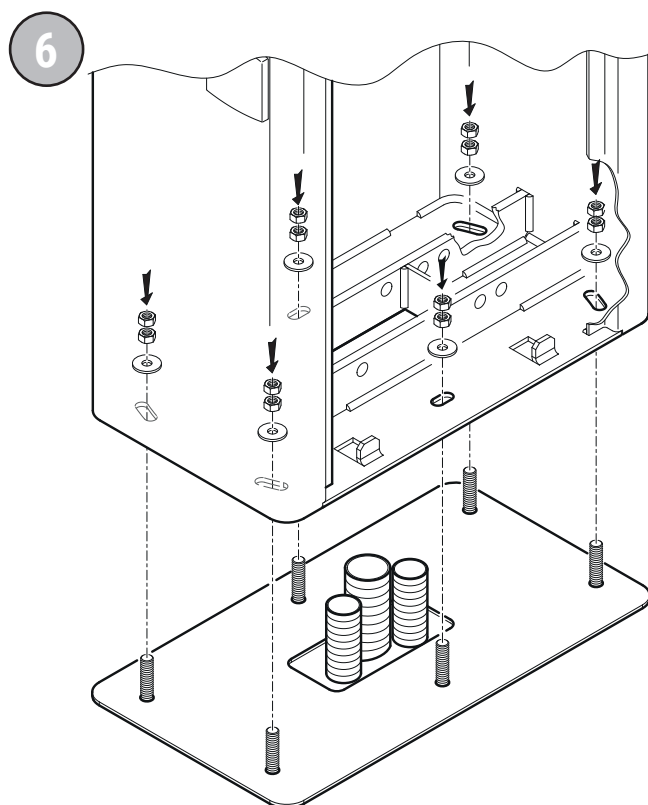
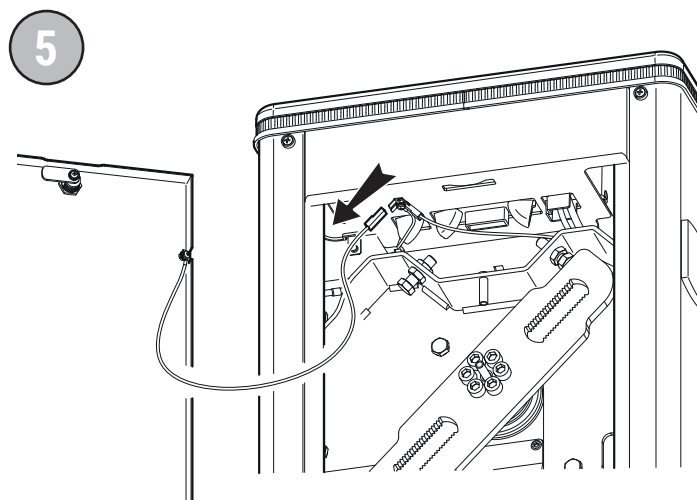
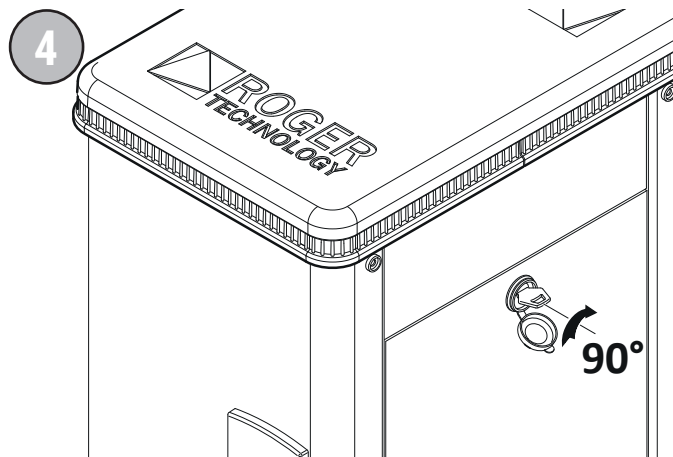
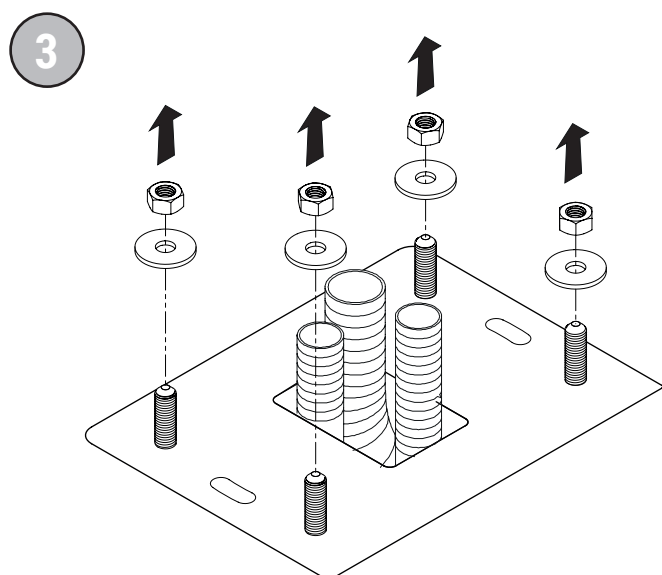
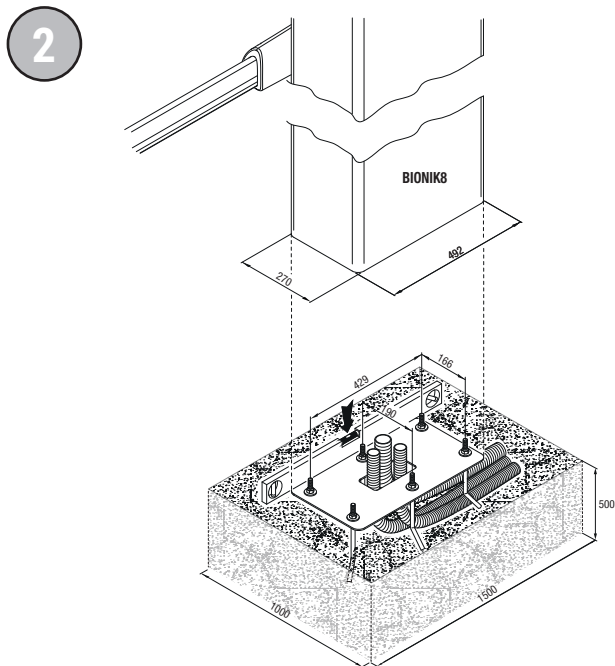
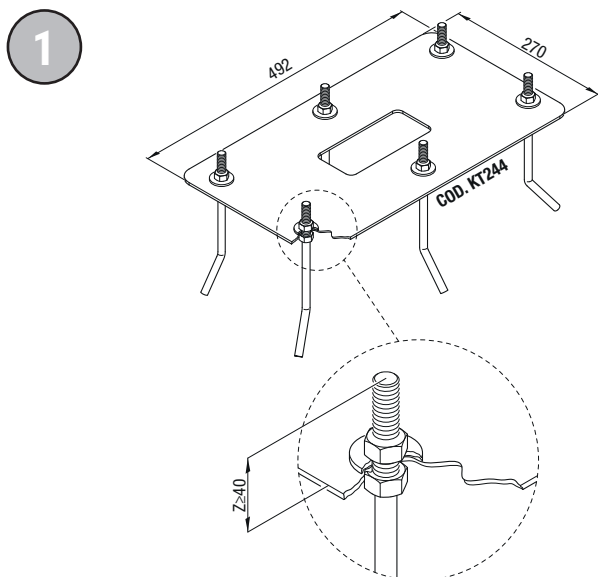
- Check that the material received is in good condition and suitable for the application.
- Check that the operating limits of the product are not exceeded.
- Check that the site chosen for installation meets the overall space requirements of the product and that there are no obstacles hindering open or close manoeuvres.
- Check the concrete base for the barrier installation. The base must be cast in accordance with proper working practices, perfectly level and clean.

10.2 Installing base plate

- The illustrations herein are indicative only. The space necessary for fastening the automation system and the accessories may vary depending on the overall dimensions of the installation. The installer is responsible for determining the most suitable solution.
- Excavate a foundation pit measuring 1,5m x 1m x 0,5 m and fill with concrete reinforced with steel mesh.
- Fasten the 4 anchor ties to the plate (fig. 1). **N.B.:** the bottom nut must be tightened to the end of the thread on the screw so that the length **Z** is at least 40 mm.
- Sink the base plate with the anchors in the centre of the foundation pit, so that the surface is flush with the concrete and perfectly level. The corrugated cable conduits must protrude by a few centimetres from the centre of the plate (fig. 2).
- **Installation on existing surfaces.** Place the base plate on the surface and trace the positions of the fastener points. Drill the surface and fit 6 expansion anchor bolts (purchased separately).

10.3 Installing the barrier

- N.B.:** the barrier is configured by default for installation on the right hand side (viewed from the inspection hatch).
- Undo and remove the washers and nuts from the anchors on the base plate (fig. 3).
 - Open the inspection hatch, turning the key clockwise 90° (fig. 4) and remove it.
 - Place the cabinet on the plate. The anchors on the base plate must fit through the six slots.
 - Fit the washers and nuts removed previously. Move the cabinet as necessary in the slots to adjust the position of the barrier correctly.
 - Tighten the nuts securely (fig. 6).



10.4 Selecting direction of aperture

BIONIK barriers are configured by default for installation on the right hand side (seen from the inspection hatch side).

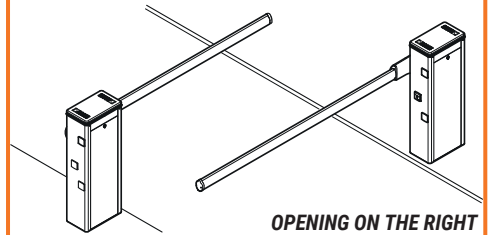


Whenever corrective actions are carried out, pay the utmost attention when releasing, locking or moving the internal mechanical parts. These operations could be hazardous for the installer.

For left hand installations:

- Unlock the barrier (see chapter 20).
- Turn the linkage lever as shown in figure.
- Move the mechanical stop.
- Lock the barrier (see chapter 20)

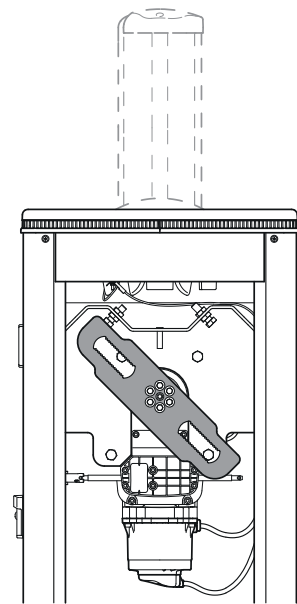
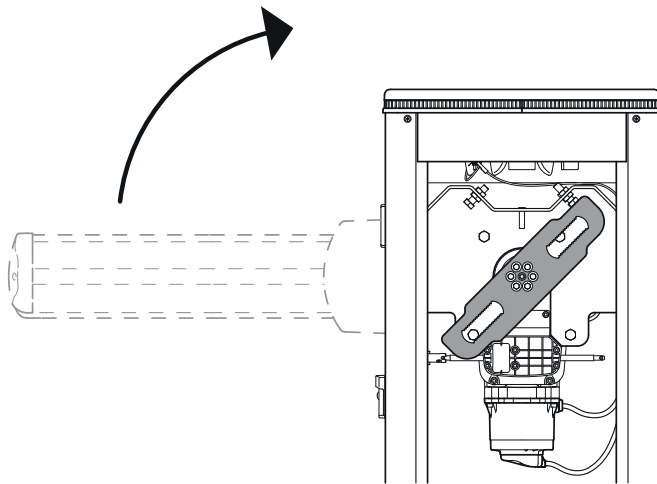
OPENING ON THE LEFT



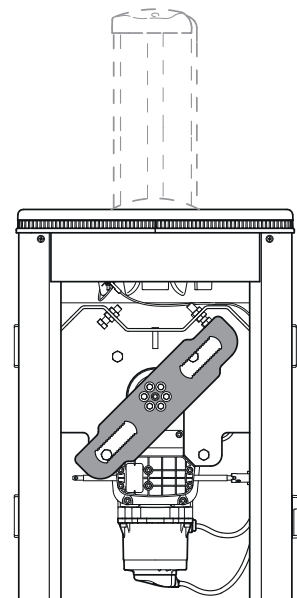
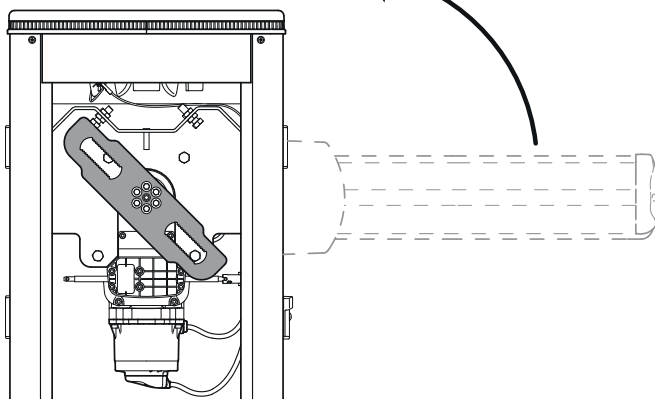
OPENING ON THE RIGHT

7

**BARRIER INSTALLED ON THE RIGHT (seen from the inspection hatch side)
AND THE BOOM OPENING/CLOSURE GATE ON THE LEFT**



**BARRIER INSTALLED ON THE LEFT (seen from the inspection hatch side)
AND THE BOOM OPENING/CLOSURE GATE ON THE RIGHT**



11 Boom installation

IMPORTANT: The BIONIK8 barrier is supplied with two 4.1 m booms (**D1** and **D2**).

WARNING!

- Unlock the barrier (see chapter 20).
- Turn the linkage lever into the position necessary for installing the boom horizontally.
- Lock the barrier.

11.1 D1 boom preparation (figure 8)

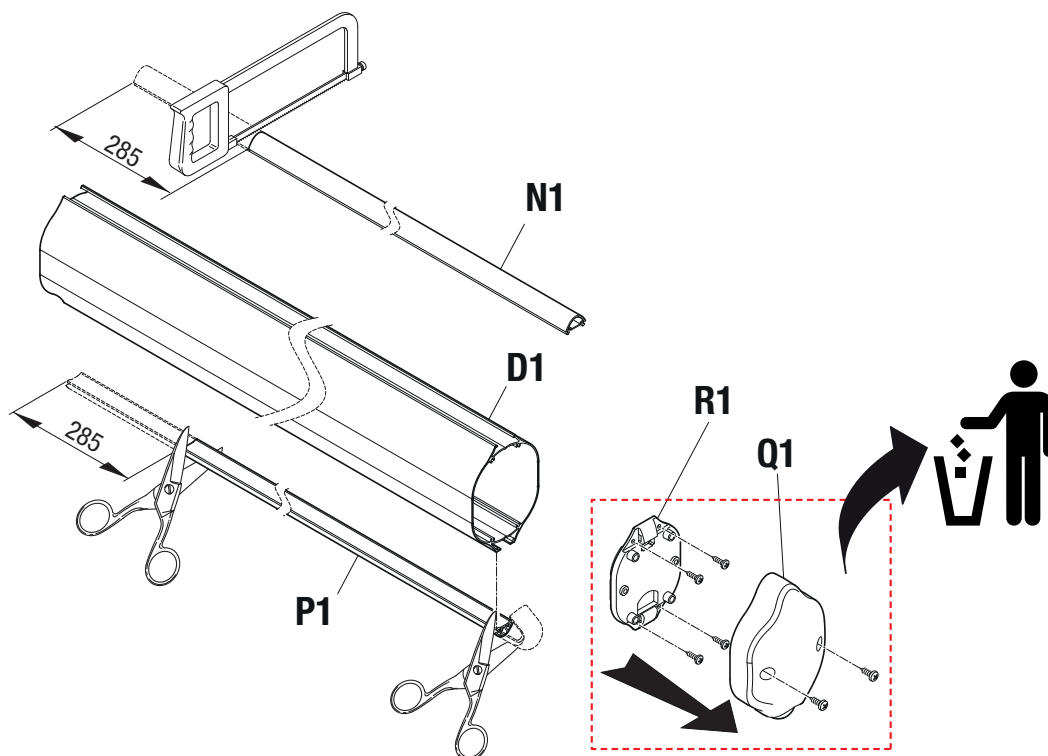
: to avoid damaging the surface of the components, it is recommended to place them on a stable and soft surface.

- Remove the plug **Q1** and the end flange **R1**. These two parts will NOT be used again.
- Remove the led cover **N1** and shorten it by 285 mm from the side where it is fastened to the boom support.
- Remove the protective rubber **P1** and shorten it by 285 mm from the side where it is fastened to the boom support.
- Cut the excessive protective rubber at the opposite end as well.

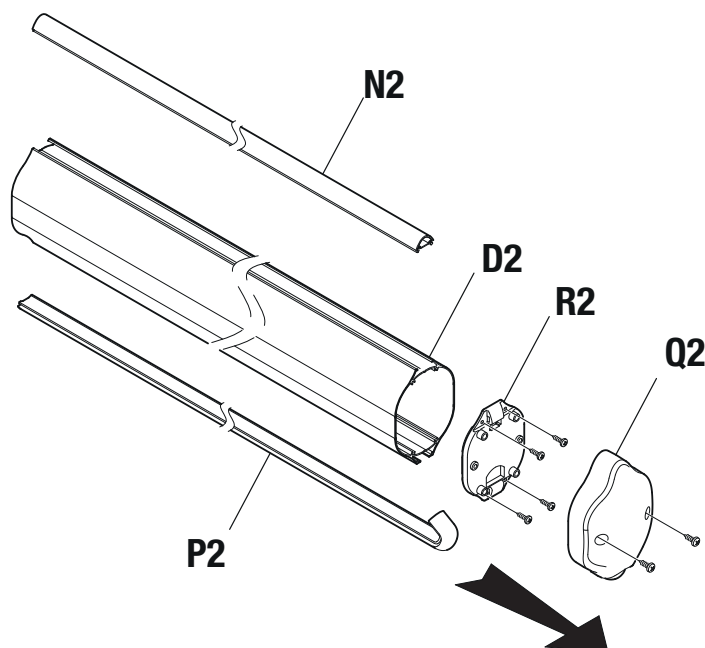
11.2 D2 boom preparation

- Remove the plug **Q2** and the end flange **R2**.
- Remove the led cover **N2** and the protective rubber **P2**. **CAUTION:** these two components should NOT be cut.

8

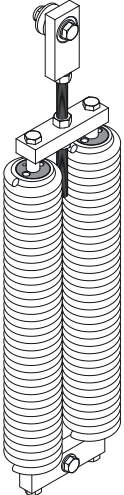
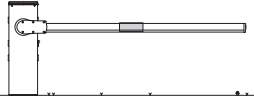
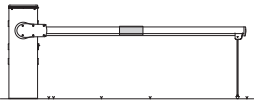
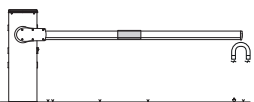
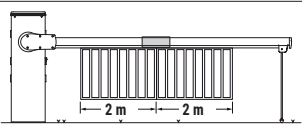
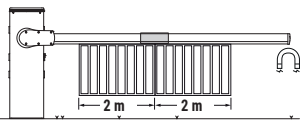
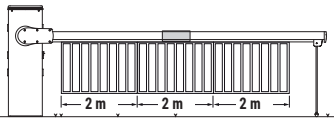
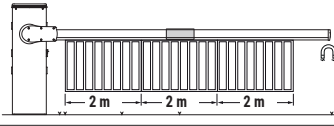


9



12 Installing and adjusting the spring

i The booms are understood as complete with shock-resistant rubber and LED strips

		BI/008 (con asta fino a 8 m) (boom up to 3 m)	
SP/85/AS/02			
			
			
			
			* The adjustable fixed end rest with integrated magnet BAFS/05 must be used
			* The adjustable fixed end rest with integrated magnet BAFS/05 must be used
			* The adjustable fixed end rest with integrated magnet BAFS/05 must be used

! **WARNING!** For booms of 4 m or more, it is mandatory to use the BAFS fixed end rest or the BAMS hinged end rest.

! **ATTENTION!** Images are purely indicative, for correct installation and use of the accessories refer to the respective instruction manuals.

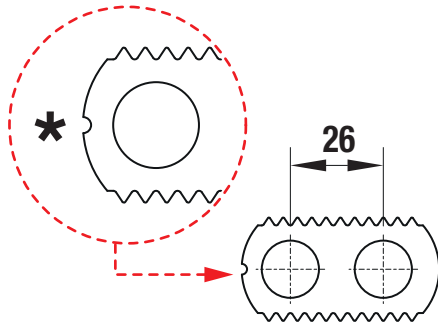
12.1 Installation and adjustment of the balancing unit

- The balancing unit is composed of a linkage lever, a slider **[CU]** and a spring unit.
- The linkage lever has two 4 mm pitch toothed windows, on which the **[CU]** slide will be fit.
- On one of the holes on the slider **[CU]** the SPRING SET **SP/85/AS/02** will be fit.
- The supplied sliders are of two types **CU1** and **CU2** and can be distinguished by the identifying marks (see * and **). The two types of sliders allow millimetre adjustment of the spring travel, since the spacing between the holes is different (26-24 mm), see details in fig. 14 and 15.
- Fit the most appropriate slider **CU** for a correct balancing of the boom.

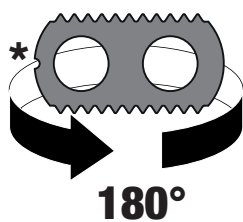
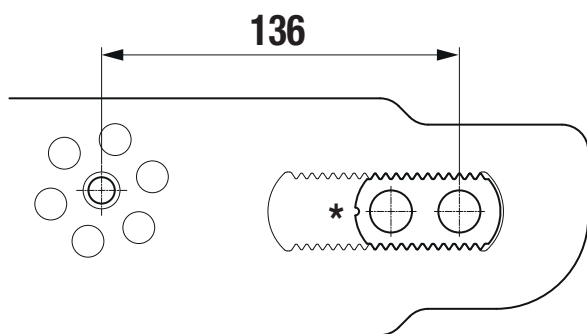
12.2 Slider selection

- The correct position of the slider is determined by the boom weight: the heavier the boom is (weight determined by the totality of the accessories installed), the more to the outside the slider should be installed.
- Reversing the insertion direction of the slider, rotating it by 180°, the hole spacing value is modified in relation to the linkage lever centre, see fig. 14 and 15 (e.g. 135, 136, 137, 138 mm values).
- To decrease the travel (extension) of the spring, move the slider **CU** inward by one pitch in the linkage lever and check the tensioning of the springs.

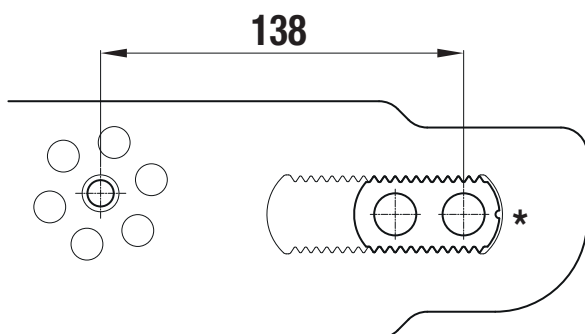
14 SLIDER 1- CU1



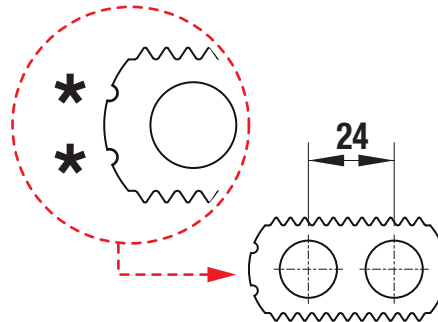
Example1



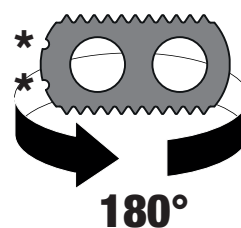
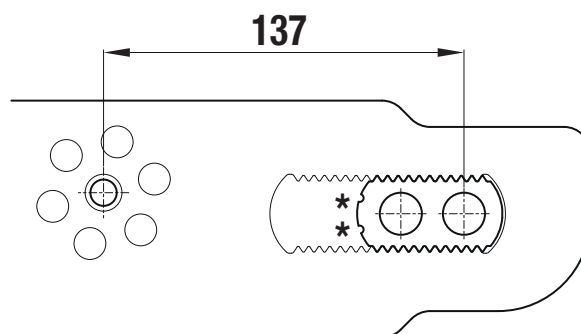
Example 2



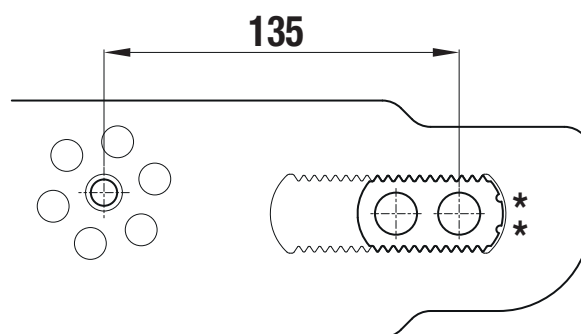
15 SLIDER 2- CU2



Example1



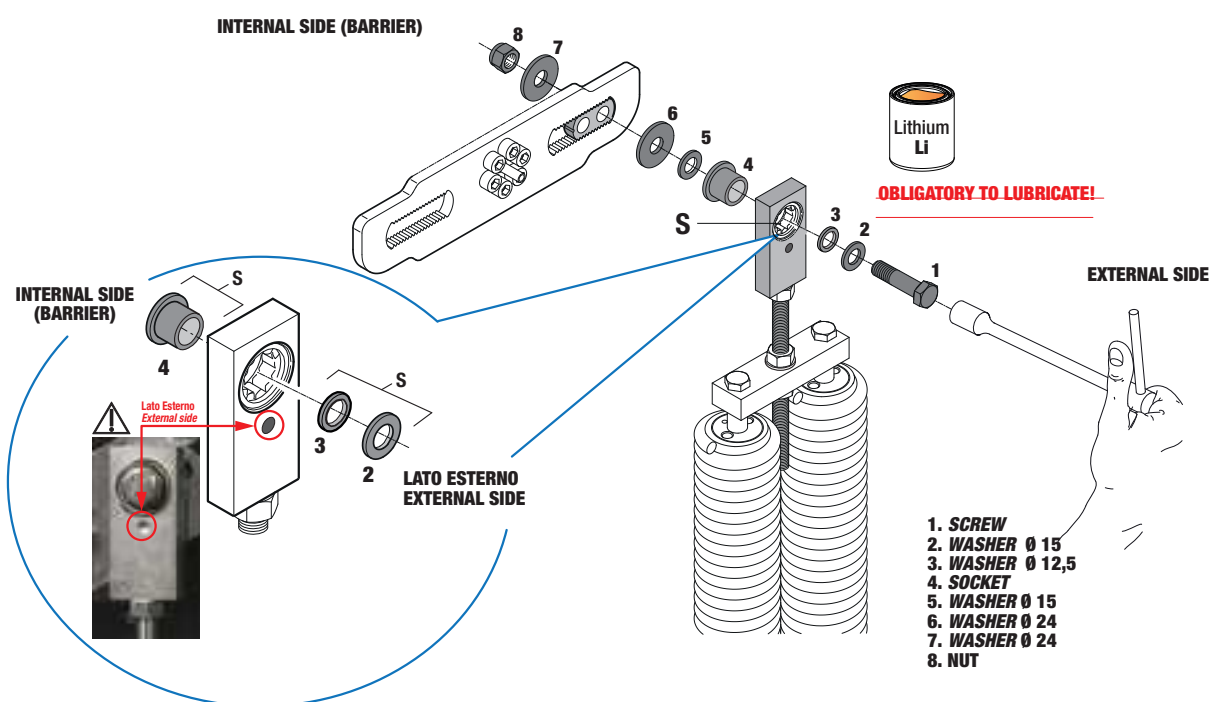
Example 2



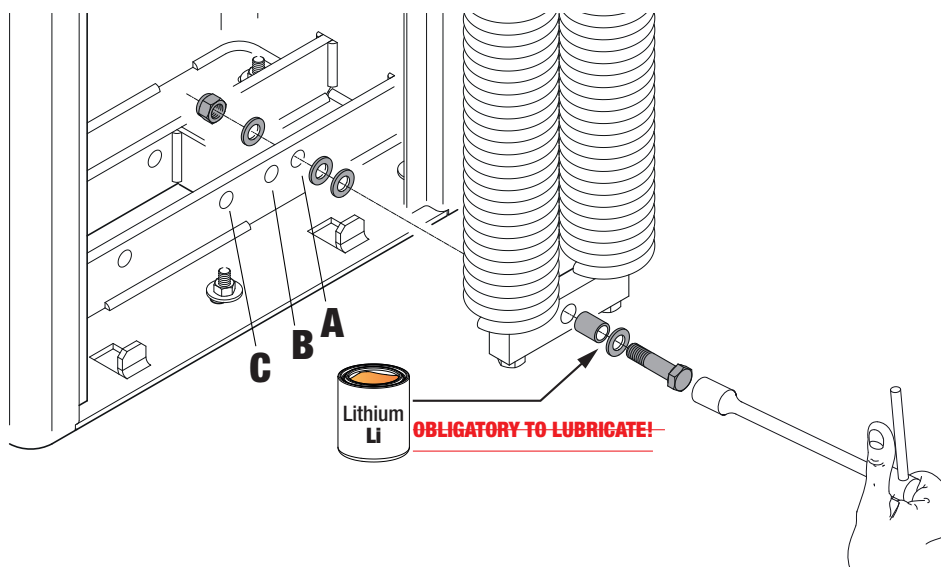
12.3 Spring unit installation

1. Unlock the barrier (see chapter 20) and move the boom into the completely open vertical position.
2. Fasten the spring unit **SP/85/AS/02** to the linkage lever using the screws included (fig. 16), according to the opening direction and in the position that allows the correct movement of the barrier. **The internal roller bearing [S] is composed of 3 modular elements which, if incorrectly assembled, inhibit the correct operation of the barrier.**
3. Fasten the springs to the fixed structure (fig. 17) on the steel cross bar of the barrier, using the screws included. The heavier the boom is (totality of the accessories installed), the more to the outside the springs should be installed (hole **A**).
4. Check the correct operation of the balancing system.
 - Lift the boom manually to an angle of 45° and let go. If the boom rises or falls, try another position of the slider **CU1**. Whenever this is not sufficient, the slider can be rotated by 180°, to change the 2 mm holes pitch (fig. 14 - values 136 and 138).
 - To obtain millimetre precision, replace **CU1** with the **CU2** slider included (fig. 15 - values 135 and 137).
5. Grease the points indicated in fig. 16 and 17 with LITHIUM grease (EP LITHIUM). Available upon request, article **RS/GR2/100**: 100 g can of lithium grease.

16



17



12.4 Spring adjusting

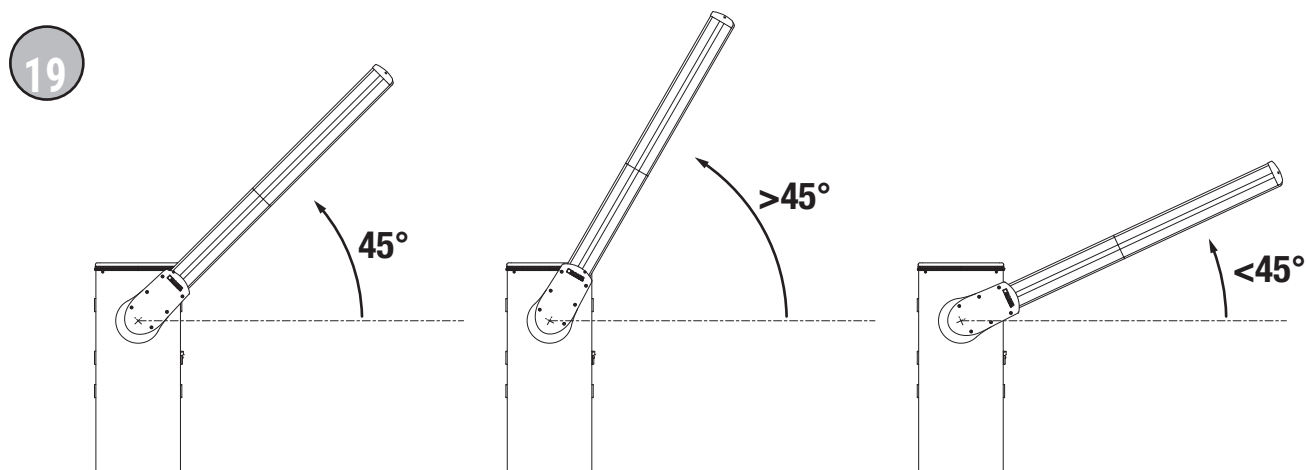
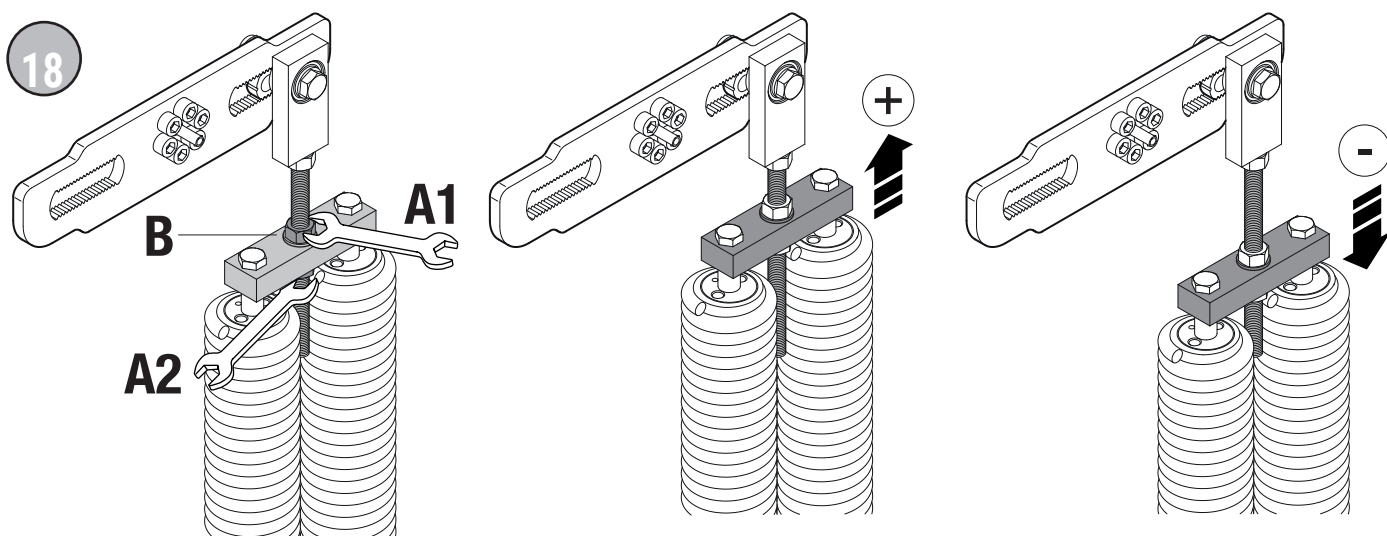
1. Adjust the spring tensioning by loosening the nuts **[A]** as indicated in fig. 18.

1. By moving upward the fastening cross bar **[B]**, the spring tensioning increases; vice versa, by moving it downward, the tensioning decreases.

2. Lift the boom manually to an angle of 45° and let go. If the boom rises, reduce the spring tension. If the boom falls, increase the spring tension (fig. 19).

3. Once the spring tension is correct, tighten the lock nuts securely.

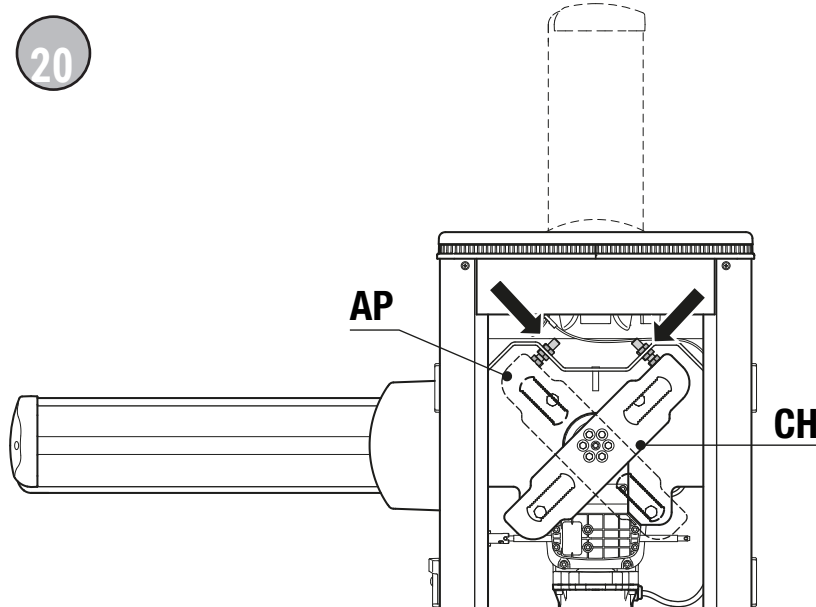
- In order to protect the spring from moisture and internal condensation, it is good practice to brush the spring with a thin layer of grease, which will prevent rusting.
- It is good practice to silicon the cable passage hole at the base of the barrier.



13 Adjusting the mechanical stop

The figure 20 shows the mechanical stop on a barrier installed on the **LEFT** hand side.
For barriers installed on the **RIGHT**, perform the mirror images of the procedures illustrated.

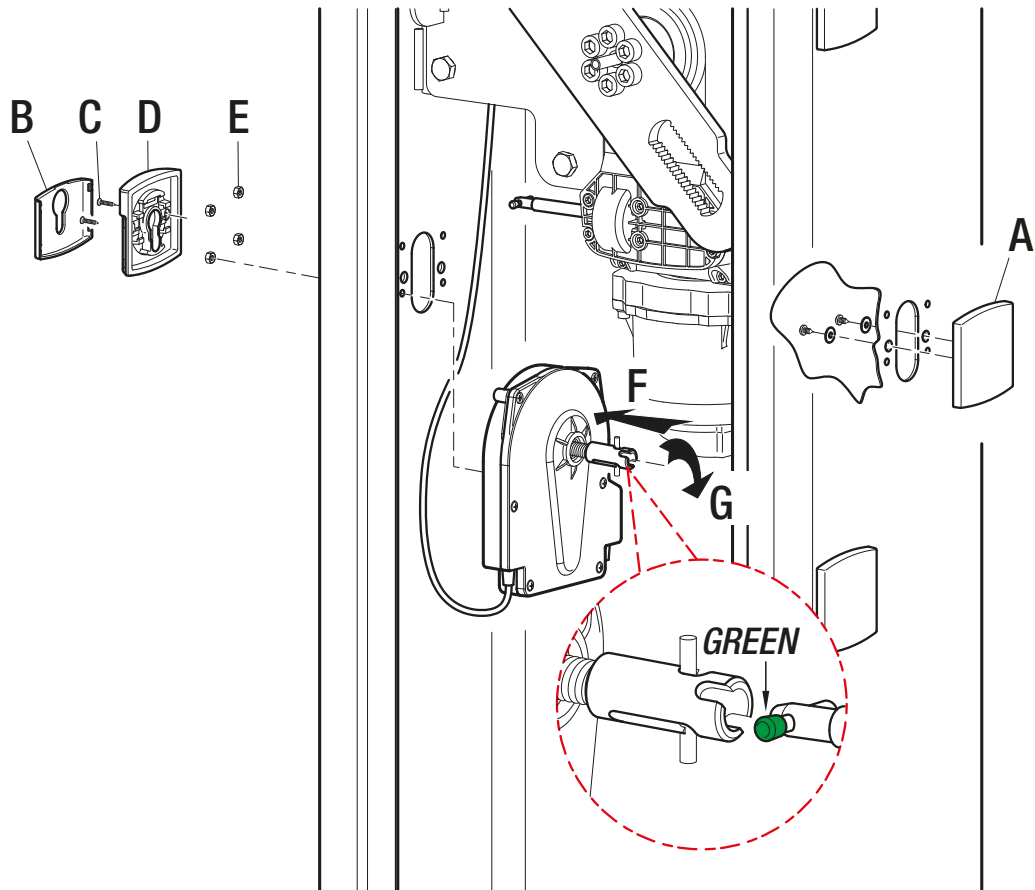
- Unlock the barrier (see chapter 20).
- Set the completely open **[AP]** and completely closed **[CH]** positions by adjusting the relative mechanical stops.
- Lock the barrier (see chapter 20).



14 Installing the lock release system

The lock release system is already installed in the factory on one of the two side of the barrier.
If it is necessary to install the system on the opposite side (compared to springs):

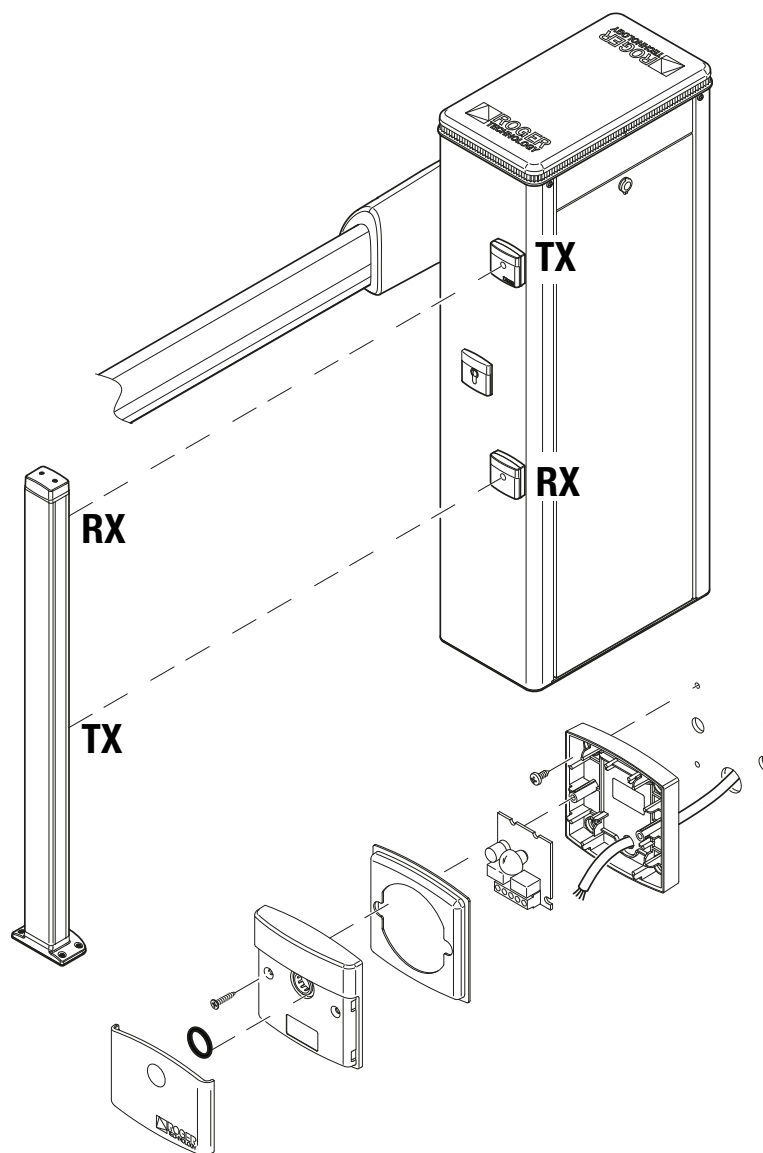
- Open the inspection hatch.
 - Remove the screws fastening the plastic cover **[A]**.
 - Remove the escutcheon plate **[B]** of the lock release system, prising the lateral clips open to detach.
 - Undo the two self-tapping screws **[C]** and remove the aluminium front panel **[D]**.
 - Undo the four M5 nuts **[E]**.
 - Push the steel connector **[F]** outwards to compress the spring and rotate by 45°.
 - Detach the lock release system and install on the opposite side, taking care not to damage the safety cable.
- N.B.:** two coloured caps (red and green) are fitted to check that the lock release system is installed correctly, regardless of which side it is fitted on.
When the barrier is locked, the green cap must face towards the inspection hatch (installer view). If not, the lock release system is installed incorrectly.
- Tighten the nuts **[E]**.
 - Fit the aluminium front panel **[D]** and fasten with the screws **[C]**.
 - Fasten the escutcheon plate **[B]** on the lock release system.
 - Fit the plastic cover **[A]** on the opposite side.



15 Connecting photocells!

G90/F4ES photocells may be installed on both sides of the barrier at two different heights: (50 cm or 100 cm).

- Disconnect from mains electricity and from battery power (if applicable).
- Open the inspection hatch, turning the key clockwise by 90°.
- Undo the four screws fastening the head.
- Remove the head after disconnecting the flashing light cables.
- Open the cover of the **CTRL** control unit.
- Undo the two screws fastening the plastic cover of the photocell housing from the inside.
- Fasten the **G90/F4ES** photocells to the barrier.
- Route the connector cables upwards, taking care not to interfere with the movements of the automation system, and push them through one of the openings on the control unit box.
- Connect the photocells cables to the specific terminals as indicated in the installation manual for the **CTRL** controller.
- See the **CTRL** control unit manual for instructions on setting the photocells.
- Close the control unit cover correctly, ensuring that it is watertight.
- Refit the barrier head.
- Close the inspection hatch, turning the key anticlockwise by 90°.
- Tighten the four screws to the head.



16 Electrical connections

All electrical connections must be made with the unit disconnected from mains power and, if applicable, battery power. See controller manual for instructions on making connections and programming **CTRL**.

Before connecting to electrical power, ensure that the mains power specifications on the identification plate match the mains power supply used. A switch or an omnipolar cut-off switch with a contact opening of at least 3 mm must be installed on the mains power line.

Ensure that an adequate residual current circuit breaker and a suitable overcurrent cut-out are installed ahead of the electrical installation.

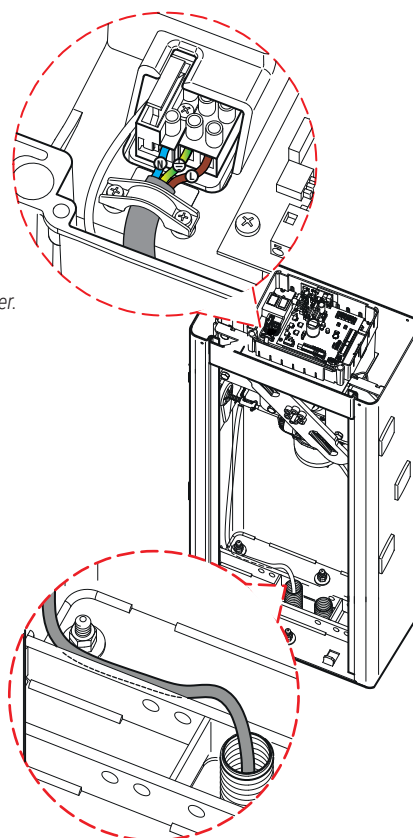
Use a 3x2.5 mm² double insulated cable for the mains power line.

Feed the cable on the left hand side of the barrier through the rubber cable grommet on the left hand side of the controller casing and connect it to the terminals L (brown), N (blue) and $\perp$ (yellow/green) inside the automation unit.

Fasten the power cable with the cable grips included.

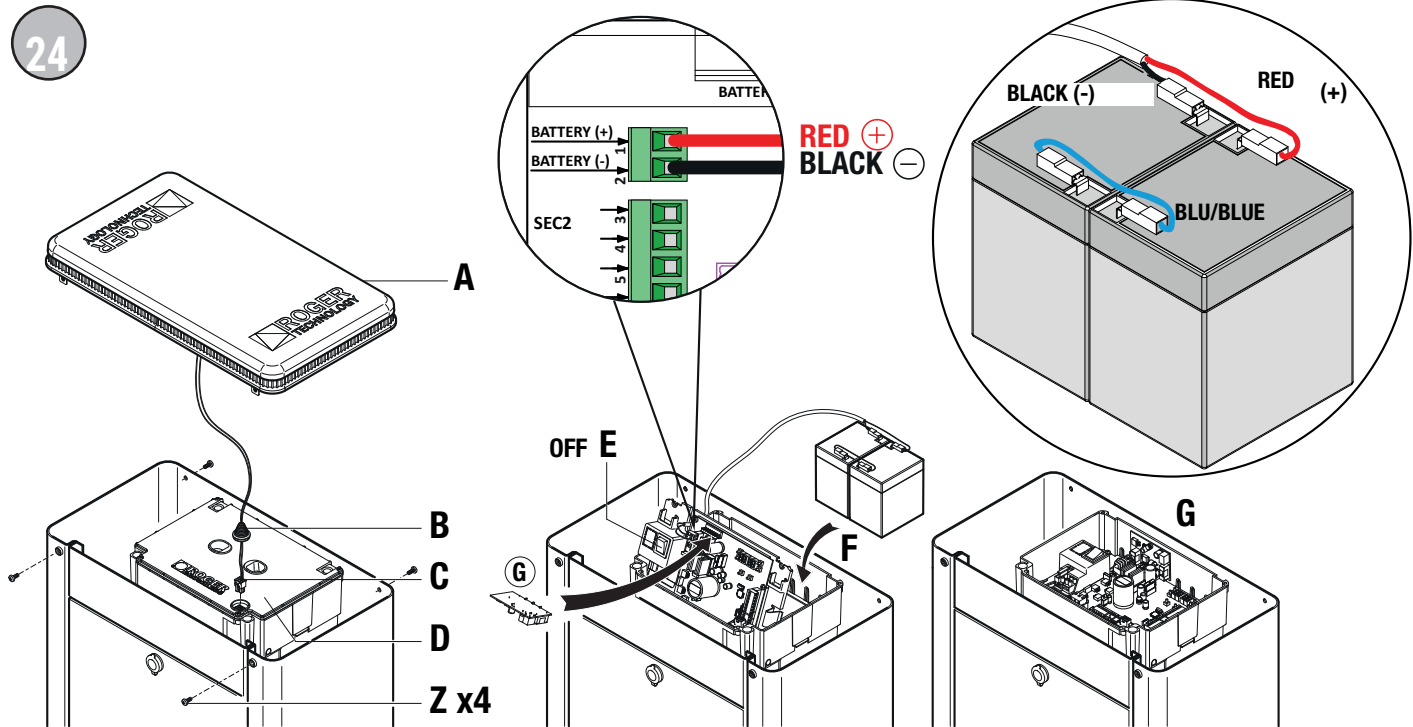
At least 50 mm of the connector cable conduit must protrude from the holes in the base plate and into the automation unit.

Ensure that there are no sharp edges which could damage the power cable.



17 Installing the battery kit (optional)

1. Disconnect the mains power.
2. Unscrew the screws **[Z]** and remove the head **[A]** (if applicable).
3. Lift the cable grommet **[B]** and disconnect the connector **[C]**.
4. Open the transparent control unit cover **[D]**.
5. Switch the control unit switch to the OFF position **[E]**.
6. Lift the control unit and insert the batteries in their housing **[F]**.
7. Connect the red, black and blue wires to the batteries (see detailed view).
8. Connect the batteries to the **+BATTERY** terminal (red wire) and **-BATTERY** terminal (black wire).
9. Insert the battery charge board **BI/BCHP** in the plug-in connector **[G]**.
10. Reposition the control unit.
11. Switch the control unit switch to the ON position **[E]**.
12. Reposition the transparent control unit cover **[D]**.
13. Reconnect the connector **[C]** and close the cable grommet **[B]**.
14. Close the head **[A]** and tighten the front screws **[Z]**.
15. Reconnect the mains power.

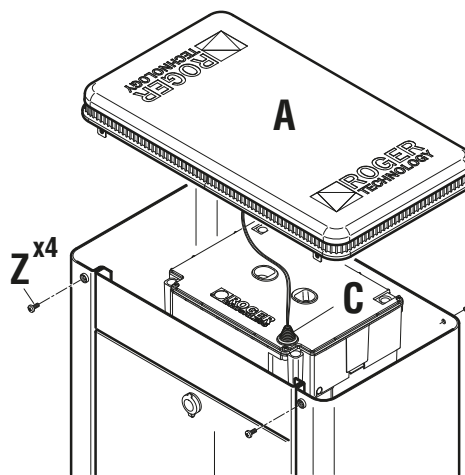
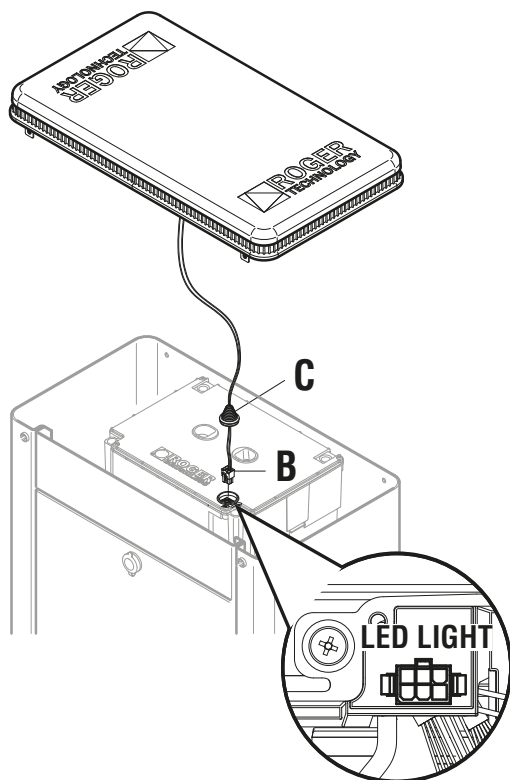


18 Installing the BI/BLED/8 led flashing light

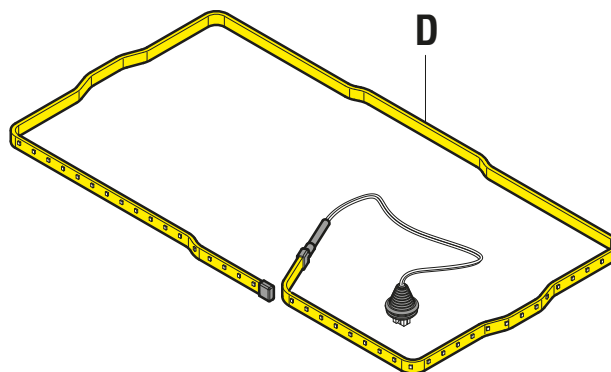
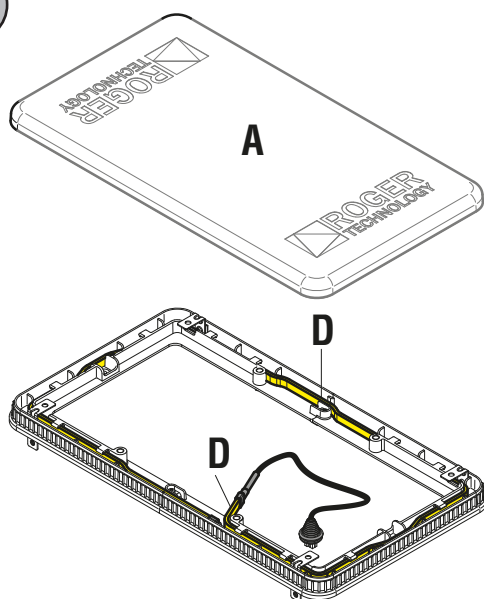
In case of replacement:

1. Disconnect the mains and battery power supplies (if applicable).
2. Unscrew the screws **[Z]** that fasten the head **[A]** to the barrier.
3. Lift the cable grommet **[C]**.
4. Disconnect the connector **[B]**.
5. Remove and overturn the head **[A]**.
6. Remove the **BI/BLED/8** flashing lamp unit **[D]** from the diffuser.
7. Insert the new LED circuit in the diffuser, paying attention to the installation direction (fig. 26).
8. Insert the connector **[B]** in the LIGHT terminal of the control unit.
9. Refer to the control unit manual CTRL for the flashing lamp unit settings.
10. Fasten the cable grommet **[C]**, making sure it is positioned correctly.
11. Reposition the head **[A]** on the barrier.
12. Tighten the fastening screws **[Z]**.
13. Reconnect the mains and battery power supplies (if applicable).

25



26



19 Maintenance

N.B.: Only use original spare parts when repairing or replacing products.

The installer must provide the user with complete instruction for using the motorised door or gate in automatic, manual and emergency modes, and must hand the operating instructions to the user of the installation upon completion.

The installer must compile the maintenance log book, in which all scheduled and unscheduled maintenance operations performed must be indicated.

The installation must be subject to regular maintenance. We recommend servicing at least once every 6 months.

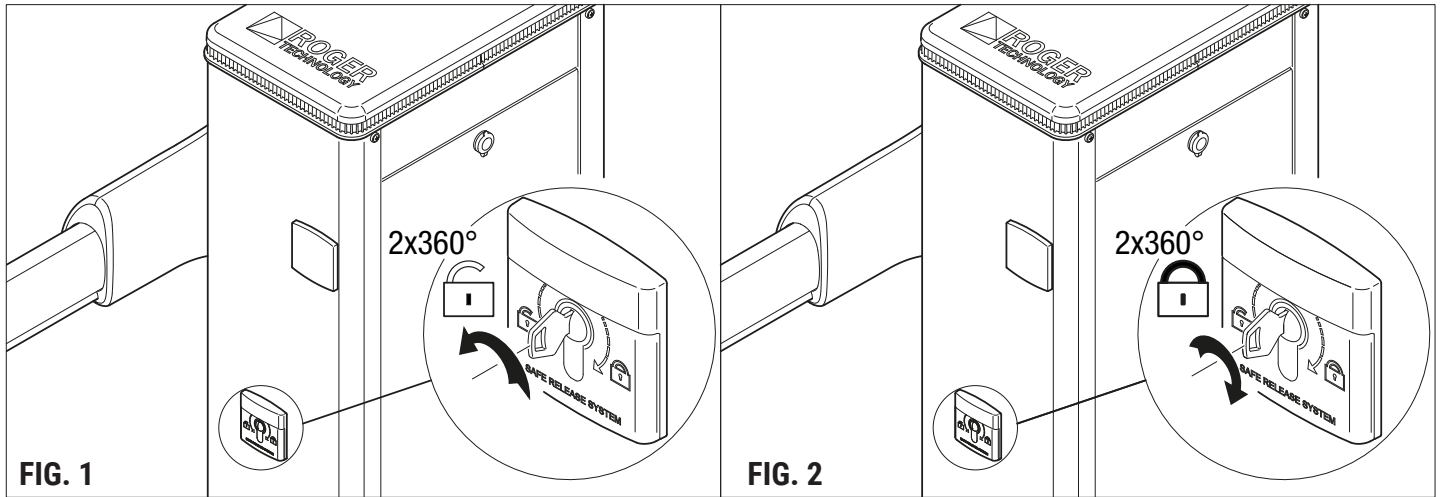
Disconnect from mains electricity and from battery power (if applicable) to avoid the risk of accident or injury.

- Check the tightness of all the fastener screws and nuts.
- Clean the photocell lenses with a cloth moistened slightly with water. Do not use solvents or other chemical products, as these may damage the electronic components.
- Clean and lubricate the pivot points with lithium based grease (EP LITIO).
- Check the electrical connections.
- Check that the manual lock release system works.
- Check that the boom is balanced correctly.
- Check that there are now plants within the radius of action of the boom which could interfere with the photocells or with the movements of the boom itself.

Reconnect to mains power.

- Check that the safety devices and all the control functions work correctly.
- Check that the obstacle detection function works correctly.
- Check that there is no risk of the boom accidentally lifting persons or objects.
- Check that the force limiting function prevent potentially dangerous situations in compliance with the standard EN 12445.

20 Release and lock procedure



Whenever corrective actions are carried out, pay the utmost attention when releasing, locking or moving the internal mechanical parts. These operations could be hazardous for the installer.

In some situations, such as in the event of a power outage or scheduled or extraordinary maintenance, it is necessary to release the automation. The operation of the release of the automation must be carried out when the boom is stopped in the closed position (horizontal). Moreover, ensure that at the time of release, no person, animal, item or vehicle is passing by or stopped within range of automation.

RELEASE AND MANUAL OPERATION

Insert the key included into the lock and turn it anticlockwise by 360° making 2 complete turns, as indicated in fig. 1. Move the boom manually.

RESTORING AUTOMATIC OPERATION

To lock the barrier again, turn the key clockwise by 360° making 2 complete turns, as indicated in fig. 2.

21 Declaration of conformity

I the undersigned, as acting legal representative of the manufacturer: **Roger Technology - Via Botticelli 8, 31021 Bonisiolo di Mogliano V.to (TV)** hereby DECLARE that the appliance described hereafter:

Description: Automatic barrier

Model: BIONIK8 serie

Is conformant with the legal requisites of the following directives:

- **2006/42/CE** (Machinery Directive) and subsequent amendments;
- **2014/53/UE** (RED Directive);
- **2011/65/UE** (RoHS Directive) and subsequent amendments;

and that all the standards and/or technical requirements indicated as follows have been applied:

EN 61000-6-3; EN 61000-6-2; EN 60335-1

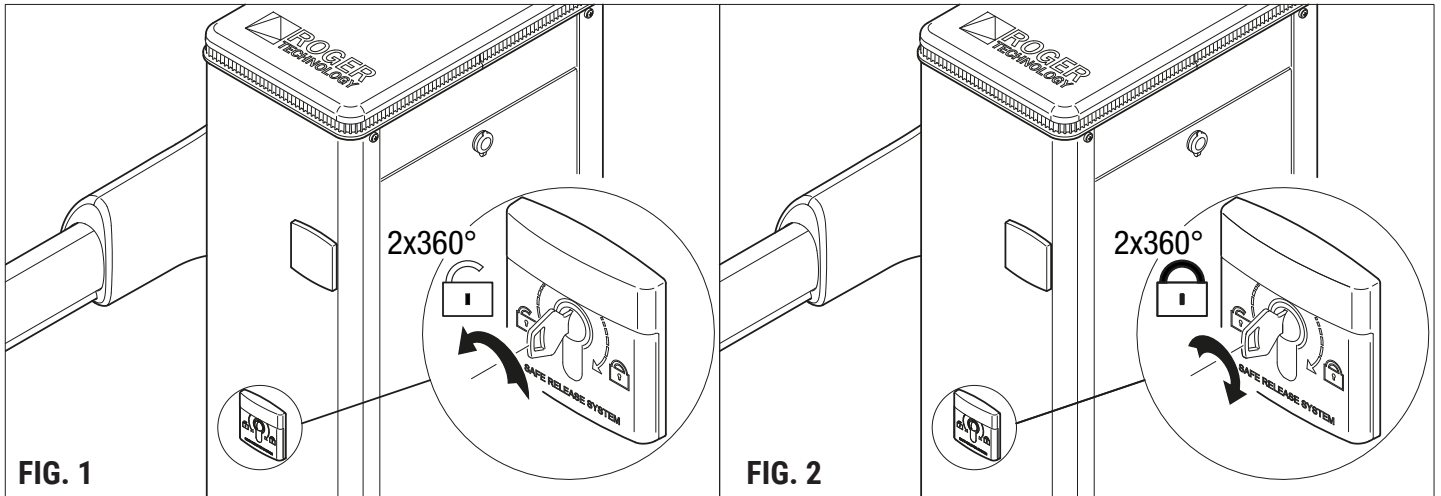
Last two figures of year in which marking was applied **CE 18**.

Place: Mogliano V.to

Date: 01-10-2018

USER GUIDE

Release and lock procedure!



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BI/008

BIONIK BRUSHLESS 36V!barrier for bars up to 4 metres, with on-board control unit, absolute encoder, complete with fixing base with tie rods and screws, and boom fixing flange !

BI/008/115!

BIONIK brushless 36V!barrier for bars up to 4 metres, with on-board control unit, absolute encoder, complete with fixing base with tie rods and screws, and boom fixing flange. For line voltages of 115V !

The sound pressure during use is less than 70 dB(A).